

THE Y-DNA PROJECT

October 2014

Quarterly report from Elizabeth O'Donoghue/Ross, the Society's Group Administrator

We have two new members since the last report, one in the Glens and one in the Mór Group A, and several upgrades to further markers and new SNP results.

I neglected to update the Society spreadsheet with some of the SNP results last quarter, so they are all now present, with the kit numbers grayed and the new data cells marked with an outline to indicate which are the new results. Family Tree has changed the way they designate the haplogroup for their customers, and though it must relate to their haplotype, it is not always apparent how they arrived at assigning one person at one level and a similar person at another. I have tried to update and synchronize them appropriately.

We received the results for The Glens BIG Y test in early August. Before I discuss those details, I want to point out some of the research that has been done at the R1b-CTS4466 Plus haplogroup project surrounding the Irish Type II haplotype, which is defined by the SNP CTS4466, and how it affects our project. The principles remain the same for other subclades and haplogroups as well.

The discoveries made through the BIG Y test have identified a number of different subclades beneath CTS4466, and though all the participants included in The Glens tribe in the spreadsheet are Irish Type II, not everyone in the tribal grouping belongs to the same subclade. You can see the complete phylogenetic tree for CTS4466, showing all the subclades identified so far, at <https://www.dropbox.com/s/15faktac3v8pha9/CTS4466%20tree%2018-9-14.xlsx?dl=0> or <https://www.dropbox.com/s/wy2s70psmtkmiut/CTS4466%20Tree%2018-9-14.jpg?dl=0>, in either a spreadsheet or .jpg format. This tree displays the various subclades that have arisen since the common ancestor who was the first man to carry the CTS4466 SNP mutation. There have been suggestions as to how old the subclade is, and though I am still 'sitting the fence' about a possible age, I do believe that it is likely it is several thousand years old, perhaps arising sometime in the BC era. It has expanded considerably since then, and you would expect to see branching occur. It is posited that a new SNP mutation occurs roughly 100 years or so, give or take, depending who is doing the calculating. So even within a tribe with a long history, we would anticipate seeing some men carrying an SNP that others don't have.

The Glens himself has a rather unique STR value of 13 at DYS485, the 69th STR in the haplotype list. The vast majority of all Irish Type II individuals have the modal of 15. You see an occasional 14 or 16, but *no* other surname has a 13, which creates a clear cluster of men who are relatively closely related to the Chief. This gives us a benchmark from which to explore the depth of the subclade defining The Glens tribe. Fortunately, two other members of The Glens tribe have also ordered the BIG Y, one who shares the 13 and one who doesn't. When their results are in, we will hopefully be able to identify one or more SNPs that are unique to the tribe

and that unites them, and perhaps separates them as well, while also separating them from all the other Irish Type II haplotypes.

Nigel McCarthy, a co-administrator at the R1b-CTS4466 Plus project, had developed a sizeable phylogenetic tree for a good many of Irish Type II individuals. You can access it at <https://www.dropbox.com/s/svqt6zhxbr2eqfs/McCarthy%20Group%20A%20and%20IT2%20Phylogenetic%20Tree%20%282014-09-14%29.pdf?dl=0> . It contains the cluster of men with the 13 at DYS485 on page four and a few other O'Donoghues scattered amongst the rest of the men in the chart. Not everyone will be in it. He is focusing on haplotypes with at least 67 markers.

To address The Glens results, in addition to CTS4466, the flagship SNP defining the Irish Type II haplotype, The Glens is positive for S1121, a second major SNP beneath CTS4466. Several participants have already tested individually for S1121 and were shown to be positive, which reinforces that it is surely present in all of the tribe. The Glens is also positive for Z16251, for which a number of other BIG Y individuals are positive as well. He also has, at this point, a number of 'private' SNPs that are not shared with anyone else – yet. I expect that when our other O'Donoghue BIG Y test results arrive, one or more of 'The Glens' 'private' will be found in them as well. We will then have a strong Glens SNP signature and any interested participants will be able to test for them individually (a cost of only \$39 per SNP) to confirm their place in the tribe.

We do have some participants in the group who do not carry the O'Donoghue surname. For the most part, they were welcome to join at the time they did because they matched O'Donoghues more closely than anyone of their own surname. With upgrades to more markers and the database increasing considerably since the early days of the project, some of them now have other closer matches than O'Donoghues. The discovery of different SNPs downstream of CTS4466 have confirmed for some that they are not indeed that close to The Glens tribe as had been thought. The SNP discoveries are clarifying how close or otherwise some of them actually are to the O'Donoghue tribe. For instance, an O'Shea has been found to belong to A151, a different subclade than S1121. An adoptee, Allford, is A195, another separate SNP under CTS4466. You can see how these SNPs relate to each other in the chart I gave you links to access. When Spreadsheet A is updated, you will see those differences listed. I interpret this to mean that these gentlemen are not truly members of The Glens tribe itself, though they are genetic cousins at some level. As our research expands, along with more data, we may be able to pinpoint more closely where the relationship may be.

If you are interested, you can find out more about the process at the R1b-CTS4466 Plus project website - <https://www.familytreedna.com/public/R1b-CTS4466Plus/>. I will reiterate my invitation for any of you in The Glens tribe to join the project, though having at least 67 markers, or the intention of upgrading, would be most helpful to the project. The full 111 markers is ideal, and I would hope you would have a willingness to test for relevant SNPs as well. At this point, there is little use in testing for any individual SNPs such as CTS4466 or perhaps even S1121, since you would surely be positive for them. Better to save your funds for the other downstream SNPs unique to the tribe.

As I mentioned in last quarter's report, for the rest of the project members who are in different groups, subclades or even haplogroups, there is a great deal of research being done for any and all haplogroups, and if any of you are interested in pursuing SNP testing to further identify your heritage and who else is closest to you in your genetic history, it's certainly worthwhile to investigate a bit more. Feel free to contact me if you would like to investigate your own haplotype further. I can advise you and/or guide you to other haplogroup projects that would be happy to have you join them and assist in their research.

I also reiterate the importance of assigning a beneficiary for your DNA records at Family Tree. Let me know if any of you need assistance in so doing.

As usual, Rod will let you all know when the spreadsheets are updated on the Society website.